

XXX

- Gravity **9.8 BLG**
- ABV **3.8 %**
- IBU **45**
- SRM **38.7**
- Style **Dry Stout**

Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **70 min**
- Evaporation rate **10 %/h**
- Boil size **25.7 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **12.4 liter(s)**
- Total mash volume **16.6 liter(s)**

Steps

- Temp **72 C**, Time **60 min**
- Temp **80 C**, Time **15 min**

Mash step by step

- Heat up **12.4 liter(s)** of strike water to **80.7C**
- Add grains
- Keep mash **60 min** at **72C**
- Keep mash **15 min** at **80C**
- Sparge using **17.5 liter(s)** of **76C** water or to achieve **25.7 liter(s)** of wort

Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	1 kg (24.1%)	80 %	5
Grain	Pszeniczny	0.5 kg (12%)	85 %	4
Grain	Słód owsiany Fawcett	0.5 kg (12%)	61 %	5
Grain	Żytni	0.5 kg (12%)	85 %	8
Grain	Płatki owsiane	0.4 kg (9.6%)	85 %	3
Grain	Jęczmień palony	0.4 kg (9.6%)	55 %	1000
Grain	Abbey Malt Weyermann	0.25 kg (6%)	75 %	45
Grain	Carafa III	0.4 kg (9.6%)	70 %	1034
Grain	special x	0.2 kg (4.8%)	70 %	---

Hops

Use for	Name	Amount	Time	Alpha acid
Boil	HBC 472	25 g	60 min	10.6 %
Boil	HBC 472	10 g	20 min	10.6 %
Boil	HBC 472	10 g	5 min	10.6 %
Whirlpool	HBC 472	10 g	10 min	10.6 %
Dry Hop	HBC 472	10 g	3 day(s)	10.6 %